

REMARKS

By this Amendment, the specification is amended, claims 1 and 6 are amended, and claims 10-13 and 17-34 are canceled. Accordingly, claims 1-9 and 14-16 are pending in this application. No new matter is presented in this Amendment. Reconsideration of the application is respectfully requested.

The Examiner objects to the specification because of informalities. Specifically, the paragraph beginning at page 3, line 7, contains references to the claims. Applicants cancel the cited paragraph. In addition, at page 5 line 30, reference is made to “3 to 15 volume % of a flame retarding agent,” whereas claim 11 recites “3 to 15 weight %” of the flame retardant. (Emphasis added). Notwithstanding the cancellation of claim 11, the specification is amended to obviate the objection thereto and is intended solely to clarify the specification, based upon the claims as originally filed. Therefore, no new matter is presented in this Amendment. Accordingly, withdrawal of the objection to the specification is respectfully requested.

The rejection of claims 1-16 under 35 U.S.C. §103(a) over U.S. Patent No. 6,248,820 to Nozaki et al. ("Nozaki") by itself or in view of one or more of U.S. Patent No. 4,774,268 to Marx et al. ("Marx") and U.S. Patent No. 6,284,343 to Maples et al. ("Maples") is respectfully traversed.

In the PTO's rejection of claim 1 over Nozaki, the Examiner asserts that “While the reference does not require the coating to be transparent, it would have been obvious to a person having ordinary skill in the art to do so in order to be able to view the underlying substrate.” Applicants respectfully disagree and submit that the Examiner appears to be asserting that a transparent coating is an obvious matter of an engineering design choice. The Board of Patent appeals and Interferences has made clear however, that the bare assertion that the modification of the prior art would have been an obvious matter of engineering design choice is insufficient to

establish a prima facie case of obviousness because this assertion is a conclusion not a reason. Ex parte Garrett, 1986 Pat. App. LEXIS 8 (Bd. Pat. App. and Inter. 1986).

Applicants further submit that the flame retardant coating of Nozaki is inherently non-transparent by virtue of its composition, and that the feature of transparency is achieved essentially through two measures that differentiate the Applicants' transparent coating from the flame retardant disclosed by Nozaki.

First, unlike Nozaki, which discloses, at column 5, lines 65-67, a film made from a mixture of carbon and condensation phosphoric acid formed on the surface of the resin, the Applicants' coating mass does not include a carbon-donor component that usually leads to a non-transparency of the intumescent mass.

Second, Nozaki discloses, at column 4, lines 65-67, that the addition of red phosphors leads to a strong red color. Applicants further submit that it is well known in the art that red phosphors do not dissolve in water and requires the use of micro-encapsulated red phosphors in order to create an aqueous dispersion containing red phosphors. Such micro-encapsulated red phosphors are disclosed by Nozaki at column 5, lines 1-5. Nozaki further discloses, at column 5, lines 33-41, that the concentration of phosphorous contained in an ammonium polyphosphate compound is preferably 15 to 35% and the average diameter of the compound is preferably 5 to 40 μm .

Thus, one of ordinary skill in the art would be aware that a resin dispersion containing "red phosphorous in an amount of 1.5 to 15 parts by weight and an ammonium polyphosphate compound in an amount of 10 to 70 parts by weight on 100 parts by weight of the solid content of said aqueous dispersion," as recited in Nozaki's claim 1, cannot be transparent because of the high content of solid particles contained therein. Applicants therefore submit that Nozaki teaches away from Applicants' transparent coating mass.

Furthermore, Applicants' coating mass comprises ammonium polyphosphate dissolved directly in the aqueous dispersion. Applicants' coating mass contains no micro-encapsulation of ammonium phosphate, red phosphors, or micro-encapsulated red phosphors used as a flame retarding agent, because the coating mass as disclosed by the Applicants is transparent.

Indeed, nowhere does Nozaki disclose, teach, or suggest the preparation of a transparent coating mass. Further, nowhere does Nozaki suggest the use of the coating mass in combination with a body made of a polymer material, the polymer material acting as a carbon-donor compound of an intumescent system that is created by the combination of the coating mass and the polymer material of the body.

Similarly, Marx and Maples fail to disclose, teach or suggest a transparent coating mass as recited by the Applicant. Marx discloses, in columns 9 and 10, the use of 35 to 44% ammonium phosphate as a flame retardant agent and Maples discloses, in column 4, table 2, and claim 20, an intumescent mass containing preferably around 30 weight % ammonium polyphosphate. Because the solubility of ammonium polyphosphate in water is 10 g/l, one skilled in the art would know that such a high content of ammonium polyphosphate will lead to a non-transparent mass.

Therefore, Applicants respectfully submit that the combination of Nozaki, Marx and Maples fails to disclose, teach or suggest a transparent coating mass, as recited in claim 1.

Accordingly, claim 1 is patentable over Nozaki by itself or in combination with one or more of Marx and Maples. Claims 2-9 and 14-16 are likewise patentable over the applied references at least in view of their dependence on claim 1. Withdrawal of the rejection is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues


previously discussed throughout prosecution); and (c) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-9 and 14-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

One month extension of time is hereby requested. A credit card authorization form in the amount of \$60.00 is attached herewith for the one month extension of time.

Respectfully submitted,


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